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ABSTRACT

To determine whether teachers' dominative and integrative contacts with children are related to their assessments of children, four kindergarten teachers were observed for 300 minutes each. The Clifton form of the Anderson observational system was used to measure teacher contacts with individual children in their classes. Teachers were then asked to assess each child's likelihood of school success, family interest and socioeconomic status. Chi-square tests of goodness of fit showed that the teachers differentiated among children in their contacts. Canonical correlation analysis indicated an overall relationship between teacher contacts and teacher assessments. Children assessed high on likelihood of school success and family interest tended to receive more integrative teacher contacts. (Author/SB)

Kindergarten Teachers' Individual Integrative and Dominative Contact Patterns with Children and Their Relation to Teacher Assessments of Children

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Abstract

To determine whether teachers' dominative and integrative contacts with children are related to their assessments of children, four kindergarten teachers were observed for 300 minutes each. They were then asked to assess each child's likelihood of school success, family interest and socio-economic status. Chi-square tests of goodness of fit showed that the teachers differentiated among children in their contacts. Canonical correlation analysis indicated an overall relationship between teacher contacts and teacher assessments. Children assessed high on likelihood of school success and family interest tended to receive more integrative teacher contacts.

Kindergarten Teachers' Individual Integrative and Dominative Contact Patterns with Children and Their Relation to Teacher Assessments of Children

Erikson (1963) and Piaget (1973) stress the importance of initiative and active interplay with the physical and social environment during the early childhood years. Dominative teacher behavior tends to suppress or limit this developmentally appropriate behavior, while integrative teacher behavior accepts, encourages and works with and through such behavior. Teacher behavior as measured on the dominative-integrative dimension and related dimensions has been shown to be related to significant aspects of children's social and emotional growth (Anderson, 1945, 1946a, 1946b; Flanders, 1967, 1968; Katz, 1969; Minuchin, Biber, Shapiro and Zimiles, 1969; Morrison, 1965; Perkins, 1965; and Spaulding, 1965).

In these studies, overall teacher behavior, often referred to as classroom atmosphere or climate, was measured and comparisons were made between groups of children in different classrooms. Although classroom atmosphere is a useful description of one aspect of the quality of children's school experience, as a measure of central tendency it obscures other. Studies of differential teacher behavior by Jackson and Lahaderne (1967) and Good and Brophy (1970) challenge the assumption that teacher behaviors are distributed consistently across children. Their findings suggest that there may often be more difference in teacher behavior within than between classes. Statements of average frequency, or mean teacher behavior, would therefore not necessarily reflect

accurately the experience of the individual children in the class.

Mounting sociological evidence of differential teacher behavior on the basis of children's social status led Hoehn (1951) to investigate the relationship between the quantity and quality of teachers' dominative and integrative contacts with children and children's social status. His findings showed that middle class children received a greater number of highly integrative contacts and lower class children received a greater number of highly dominative contacts. Hoehn's discussion of the interrelations among status, achievement and differential teacher behavior contains the germ of the now famous expectancy effect. Later studies of teacher expectancy focused on the relationship between artificially induced expectancy and children's achievement (Rosenthal and Jacobson, 1968; Beez, 1968; Claiborn, 1969; Fleming and Anttonen, 1971; Jose and Cody, 1971; Meichenbaum, Bowers and Ross, 1969). Mixed results from these studies led Baker and Crist (1971) to conclude that future research should use naturally existing teacher assessments of children.

Brophy and Good (1970) studied the relation between individual teacher-child interactions and existing teacher expectancy of children's academic achievement, and found that teacher expectancy was a consistent predictor of test-measured achievement and rates of teacher praise and criticism. Rist(1970) documented the formation of teacher expectancy and the relation between that expectancy and teacher behavior, children's achievement and children's social behavior. His findings indicate a

close relation between the teacher's assessment of each child's likelihood of school success and her assessment of his socio-economic status. His observation that the teacher used interviews with mothers and anecdotal information about children's families gathered from other teachers as sources of information suggests that teacher assessment of family interest in schooling played a role in differential teacher behavior.

The present study was designed to investigate the distribution of integrative and dominative teacher contacts among children in kindergarten classes, and the relation of that distribution to teachers' subjective assessments of those children. The specific teacher contact variables were six expressions of integrative and dominative teacher contacts. The specific teacher assessment variables were likelihood of school success, family interest in schooling and socio-economic status.

Six hypotheses were advanced in relation to the expressions of integrative and dominative teacher contacts. It was predicted that the distribution of each expression would differ significantly from a uniform distribution in each classroom. In effect, these hypotheses predicted that teachers would differentiate among children in their integrative and dominative contacts with them. The seventh hypothesis predicted that there would be an overall relationship between the six expressions of individual teacher contacts and the three teacher assessments of children.

Method

Measurement of Variables

The Clifton (1944) form of the Anderson (1945) observational system was used to measure teacher contacts with individual children. With this instrument, one observer records teacher behavior, coding individual teacher contacts according to child contacted, and into three dominative and two integrative categories: (a) DC, or dominative with evidence of conflict, (b) DN, or dominative without evidence of conflict, (c) DT, or dominative with evidence of working together, (d) IN, or integrative without evidence of working together, and (e) IT, or integrative with evidence of working together. All data were collected by the author after observer reliability training on video-tapes. Percentages of agreement between the author and another observer ranged from 87 to 100 on the five categories. Three consecutive mornings were spent in each classroom to obtain 300 minutes of coding of each teacher's contacts with individual children.

From the 300 minutes of raw data obtained in each classroom, total integrative, total highly integrative, total dominative and total highly dominative contacts were determined for each child. The IT/DC ratio, or ratio of highly integrative to highly dominative contacts, and the I/D ratio, or ratio of integrative to dominative contacts, were also computed for each child.

After the collection of observational data was completed, the teachers' subjective assessments were determined in two steps. First each teacher placed the children in her class in rank order on each of the three variables: likelihood of school success, family interest and socio-economic status.

After each ranking was completed, the teacher assigned a score to each child for that variable on a 20-point scale in which the lowest ranked child had a score of 1 and the highest ranked child a score of 20. This procedure allowed teachers to express their perception of distance between children on the variables and to express equal assessment of some children.

Sample

The subjects were 83 children attending four New York City public school kindergartens. The classrooms had a standard kindergarten activity format and did not utilize learning programs that prescribed the teacher's interaction with the children. There were no adults other than the regular teacher in any of the classrooms. The schools were located in middle class neighborhoods, and the children were English-speaking and, with one exception, white. The teachers were white middle class women with several years of teaching experience.

The four kindergartens were selected from a pool of twelve kindergartens whose teachers had volunteered to take part in the study. Brief measures of teacher behavior were made in each of the twelve rooms, using the Clifton (1944) form of the Anderson observational instrument, in order to identify four classrooms with similar classroom atmosphere.

Results

Distribution of teacher contacts

To determine whether teachers differentiated among children in their dominative and integrative contacts with them, the distribution of six expressions of individual contacts in each class was compared to a uniform distribution, using the chi-square test of goodness of fit. The results of these tests are presented in Table 1.

Table 1

Chi-square Tests of Deviation of the Measured Distribution of Six Expressions of Individual Contact Patterns from a Uniform Distribution

	Class			
	A	B	C	D
N	18	19	23	23
df	17	18	22	22
I Contacts Chi-square value	183.75*	102.13*	165.40*	199.92*
IT Contacts Chi-square value	149.53*	113.80*	115.80*	207.70*
D Contacts Chi-square value	282.58*	205.36*	125.80*	71.43*
DC Contact Chi-square value	296.78*	174.37*	324.50*	113.28*
I/D ratios Chi-square value	53.00*	66.00*	103.90*	138.50*
IT/DC ratios Chi-square value	1090.83*	135.40*	569.80*	306.30*

* $p < .005$

The chi-square values in all instances were significant beyond the .005 level, demonstrating that in these classrooms dominative and integrative teacher contacts were indeed distributed differentially among the children.

Descriptive analysis revealed the extent of the differentiation. Table 2 summarizes the individual teacher contacts in each classroom, and Table 3 shows the I/D and IT/DC ratios for each child in each classroom.

Table 2

Summary of Individual Teacher Contacts in Four Classrooms

	Contact Category	Frequency	Mean	Median	Range	
Class A N= 18	I	789	43.8	34.5	(20-99)	79
	D	953	52.9	49.5	(25-142)	117
	IT	539	29.9	22.5	(12-69)	57
	DC	190	10.5	5.5	(1-60)	59
	Total (I D)	1742	96.8	79.5	(46-230)	184
Class B N= 19	I	393	20.7	18.25	(5-47)	42
	D	1250	65.8	60.25	(32-131)	99
	IT	231	12.2	10.1	(2-35)	33
	DC	294	15.5	13.25	(1-42)	41
	Total (I D)	1643	86.5	81	(37-178)	141
Class C N= 23	I	527	22.9	19.1	(5-64)	59
	D	782	34.0	34.0	(12-63)	51
	IT	427	18.6	16.75	(4-52)	48
	DC	184	8.0	4.3	(1-52)	51
	Total (I D)	1309	56.9	53.25	(19-100)	81
Class D N= 23	I	352	15.3	14	(1-49)	48
	D	1290	56.1	55	(31-79)	48
	IT	285	12.4	11	(1-46)	45
	DC	137	6.0	4	(1-20)	19
	Total (I D)	1642	71.4	67.25	(45-126)	81

Table 3

Individual I/D and IT/DC Ratios for Four Classrooms

Class A		Class B		Class C		Class D	
I/D	IT/DC	I/D	IT/DC	I/D	IT/DC	I/D	IT/DC
1.52	29.00	.62	9.16	2.0	22.05	.64	13.82
1.23	22.00	.56	2.77	1.26	17.15	.50	11.84
1.15	20.00	.51	1.51	1.12	14.05	.44	9.87
1.10	12.00	.48	1.45	1.06	9.03	.43	8.89
1.03	9.50	.47	1.33	.93	8.53	.42	5.11
1.00	8.25	.44	1.29	.74	7.04	.41	4.36
.94	7.33	.36	1.21	.74	7.04	.39	4.32
.90	4.75	.35	1.00	.71	6.76	.33	3.65
.87	4.45	.29	1.00	.70	6.53	.31	3.39
.83	4.00	.29	1.00	.64	4.01	.26	3.32
.83	3.50	.27	.85	.64	3.33	.25	2.18
.79	2.75	.22	.75	.64	2.78	.21	1.97
.77	2.33	.20	.75	.59	2.51	.21	1.00
.67	1.69	.20	.60	.59	2.44	.20	1.00
.65	1.54	.20	.56	.54	2.18	.19	1.00
.62	1.48	.19	.41	.54	2.10	.18	.77
.49	1.07	.18	.33	.50	2.01	.14	.71
.49	.92	.18	.30	.43	1.91	.11	.60
		.16	.22	.42	1.90	.10	.58
				.38	1.58	.05	.50
				.36	1.00	.04	.33
				.32	1.00	.03	.33
				.13	.19	.02	.33

Some similarities among the four classrooms were apparent. The children in general received more dominative than integrative contacts. There was a consistent tendency for relatively few children to receive the lion's share of contacts in each category. In Class A, for example, six children, or one-third of the class, received over one-half of the total I contacts. Two of those six received nearly one-quarter of the I contacts. Four children received over one-half of the DC contacts, and one child alone received almost one-third of the DC contacts. In Class B, one child received 12% of the I contacts, 10.5% of the D contacts, 14.3% of the DC contacts, and 10.8% of the IT contacts. In contrast, another child in the same class received 1.3% of the I contacts, 2.6% of the D contacts, .98% of the IT contacts, and .3% of the DC contacts. In Class C, four children received over one-half of the DC contacts, and one of those four received 28.3% of them. In Class D, two children received only 1 I contact during the entire 300 minute observation period, and three children received only 1 IT contact during that time.

While there were more dominative than integrative teacher contacts in all four classrooms, contacts with individual children were not all predominantly dominative, as indicated by the I/D and IT/DC ratios in Table 3. Summing across classes, 10.8% of the children had I/D ratios above 1, and slightly more than two-thirds of the children had IT/DC ratios above 1.

Relation between teacher assessments and teacher contacts

A canonical correlation analysis was performed to test the hypothesis that an overall relationship existed between the six expressions of teacher contacts with individual children and the three teacher assessments

of individual children. The analysis yielded three sets of canonical variates, which are presented in Table 4.

Table 4

Canonical Correlations and Chi-square Test of Significance

Canonical variate set	Eigen-value	Canonical R	Wilk's Lambda	Chi-Square	df	p
1	.17	.41	.68	29.73	18	$< .05$
2	.12	.35	.82	15.22	10	$> .05$
3	.06	.24	.94	4.81	4	$> .05$

The first canonical variate has a canonical correlation of .41, which is significant at the .05 level, indicating that a relationship exists between the two sets of variables. In order to assess the contributions of the individual variables in each set to this correlation, the correlations of the variables with the canonical variate were examined. These correlations appear in Table 5. Three of the six teacher contact variables, integrative contacts, highly integrative contacts and I/D ratio, correlated significantly with the canonical set. Integrative behavior, then, and to a lesser extent, the ratio of integrative to dominative behavior, are the major left-hand characteristics of the underlying trait represented by the canonical variate. The dominative variables had extremely low correlations with the canonical variate, suggesting that fluctuations in dominative contacts were relatively unimportant to the relationship.

Two of the teacher assessment variables correlated significantly with the canonical variate and were also highly correlated with each other. This correlation pattern suggests that assessment of likelihood of school

success is a major characteristic of the underlying trait and that assessment of family interest is not only a characteristic of the underlying trait, but also a contributor to assessment of likelihood of school success. The low correlation of assessment of socio-economic status indicates that for this sample, assessment of socio-economic status is not a significant contributor to the relationship between teacher contacts and assessments.

Table 5

Correlations of Original Variables with the Canonical Variate

Variable	Correlation
Left-hand	
DC	.06
IT	.71*
D	-.18
I	.72*
I/D	.45*
IT/DC	.18
Right-hand	
Likelihood of school success	.83*
Family interest	.42*
Socio-economic status	.02

* $p < .01$, two-tailed.

Discussion

The statistical and descriptive analyses of teacher contact data make it clear that broad differences existed in the quantity, dominative-integrative quality and proportion of individual teacher contacts received by children in the four classrooms. On the basis of previous studies comparing children in predominantly integrative classrooms with children in predominantly dominative classrooms (Anderson, 1945, 1946a, 1946b; Morrison, 1965; Spaulding, 1965), it might be anticipated that the children who received manyintegrative contacts would tend to have more positive self-images, display more accepting attitudes toward others, and show greater initiative and spontaneity than the children who received few such contacts. The likelihood of such an outcome would seem to be complicated by the fact that the differences in integrative contacts received by individual children in the present study take place within the same classroom and in a context of overall dominativeness. Rist's (1970)study provides a comparable situation. The 'fast learners' in his study received whatever integrative teacher contacts were available in an overall dominative context. These children came to see themselves as superior to the 'slow learners', and behaved dominatively toward them. Highly differential integrative teacher behavior in the context of overall dominativeness may communicate to children, not straight-forward acceptance of children as they are, but levels of acceptability in which a child is more or less acceptable to the teacher in comparison with other children. Such acceptability based on comparison might well affect negatively both children's views of themselves and their views of other children.

Although almost all the children in the four classrooms received more dominative than integrative contacts, there were broad differences in the frequencies of dominative contacts received by individual children. While the overall dominative patterns of contacts could be expected, on the basis of previous research (Anderson, 1945, 1946a, 1946b; White and Lippitt, 1960; Katz, 1969) to produce dominative behavior in children, increase both conformity and non-conformity, and suppress spontaneity and initiative , the impact of highly differential dominative contacts may be more complex. Unequal distribution of dominative contacts in the context of overall dominativeness may be more effective than relatively equal distribution in producing conforming behavior. If some children receive high frequencies of dominative contacts, and more particularly, highly dominative contacts, children who receive fewer such contacts may then become more conforming in their behavior in order to maintain their more favorable relationship with the teacher. They may learn to inhibit their developmentally appropriate initiative and spontaneity in order to avoid dominative and highly dominative teacher contacts.

To the extent that teachers in these classrooms functioned as models of adult behavior for the children, the lesson was a simple one. Clearly, the appropriate mode of adult functioning was dominative. The distribution of dominative contacts may well have communicated that all children need to be told what to do, and some need it more than others. Bandura, Ross and Ross (1961) demonstrated the short-term effectiveness of adult modeling on child behavior. The day-in day-out dominative teacher behavior in these classrooms would seem to offer a highly pervasive model that

would be difficult to counteract if repeated year after year in other classrooms.

While directionality was not established, the demonstrated relationship between teacher contact patterns and teacher assessments suggests that teachers contacted children in their classrooms on the basis of how well they expected them to do in school and how much interest they felt their families were showing in their children's schooling. The better a child was expected to do in school and the more cooperative his family seemed to the teacher, the more teacher contacts that child was likely to receive that accepted him as an individual, encouraged or approved his initiatives, supported his spontaneous behavior, or inquired about his interests or wishes. This did not mean that the child high on those two assessments received more teacher approval. Teacher approval is not synonymous with integrative behavior, and is in fact frequently dominative, because it is often in response to child conformity to teacher expectations. The special treatment of the high-assessment children revealed in the data was something more than favoritism or extra attention. What occurred was a significant difference in the quality of contacts received by high and low assessment children on a dimension that has been shown to be related to children's social and emotional development.

The data suggest that patterns of teacher contacts with individual children were established on criteria that may well have been unrelated to the children's actual characteristics or needs. These patterns, which gave the least acceptance and support to children perceived to have the least promise and the least backing from home, seem destined to interfere substantially with the optimal development of those children. To the

extent that teachers are behaving in accordance with these assessments, they are not responding to the children themselves. If such assessment and contact patterns follow children from year to year, as Rist (1970) found, the cumulative effect on low assessment children could be profound.

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